Internship Position/Title:
Systems Engineer

Company Name:
Northern Power Systems

Location of internship:
Barre, VT

Company Overview:
Northern Power provides our global customers with reliable and cost effective renewable energy solutions that save money and reduce environmental impact. From our gearless, direct drive NorthWind® wind turbines to power electronics and controls for high power applications, Northern Power is committed to extending today's resources and creating tomorrow's choices.

Job/Project Description:
• Work within the Systems Engineering Group to support the development of wind turbine designs. Our activities fall into two broad areas: system level requirements and design development; system modeling.
• System Requirements and Design Development
  o Support the development of system requirements and specifications for all aspects of the turbine system
  o Assist in the development of design tradeoffs: performance and cost analyses; document the design choices
  o Assist in the development of manuals and other customer facing documentation
• System Modeling:
  o Develop computer models of wind turbines using industry standard programs
  o Run simulations and process data according to international standards
  o Data analysis - create statistics, histograms, fatigue loads, frequency analysis
  o Develop tools to continue to make this process more efficient
  o Evaluate field data and compare to predictions

Required Skills & Qualifications:
• Enrolled in Bachelors program in engineering
• Proficiency using Excel & Word
• Working knowledge in using Matlab and Simulink for modeling of dynamic systems
• Theoretical and practical knowledge of system-level dynamic modeling of dynamic rotating machines and power systems
• Ability to manage time and priorities in fast-changing development environment
• Ability to work in a team environment on multiple tasks
• Ability to learn new concepts quickly
• Excellent written and verbal communication skills

**Additional Preferred Skills & Qualifications:**
• Bachelors degree in mechanical engineering
• Experience in analyzing and designing wind turbines
• Experience with vibration & dynamic structural analysis
• Experience in aerodynamics and control

**Start & End Dates:**
May 2015; August 2015

**Hours/week:**
16-40

**Salary/Compensation:**
$15-20/hour, commensurate with experience

**Company Supervisor Name:**
Garrett Bywaters

**Opportunity for students to continue working part-time during the school year?**

☑️ Yes  ☐ No

**Additional Comments:**